

WHAT IS CLAIMED IS:

1. An optical head comprising:

a semiconductor laser;

means for generating a plurality of reflected light beams from at least one forward spot on an optical disk in which a light-converging optical system converges light emitted from the semiconductor laser onto the optical disk having a periodic structure in a radial direction of the optical disk so as to form the at least one focused spot on the optical disk, the plurality of reflected light beams having polarities of intensity distribution variations which are substantially inverted to each other when the periodic structure crosses the at least one focused spot on said disk;

an optical detection system which splits the plurality of reflected light beams and detects the split reflected light beams; and

an electrical circuit which provides a focus error signal of the at least one focused spot and a tracking error signal from the plurality of reflected light beams; and

wherein the electrical circuit adds respective focus error signals of the plurality of reflected light beams so that variations in the focused error signals caused by the intensity distribution variations cancel each other out, to provide a difference signal between the focus error signals, amplifies respective tracking error signals of the plurality of reflected light beams of which the polarities

are substantially inverted from each other with a gain proportional to a ratio of a total amount of a reciprocal of each of the reflected light beams when one of the at least focused spot is on an information track of the optical disk, and then takes a difference between the respective amplified tracking error signals to provide a tracking error signal for the optical head.

2. An optical head according to claim 1, further comprising a beam splitting element which splits the reflected light beams reflected from the optical disk, from an optical path of the semiconductor laser to the optical disk,

wherein the means for generating the plurality of reflected light beams having polarities which are substantially inverted from each other includes a diffraction grating disposed between the semiconductor laser and the beam splitting element, the diffraction grating being arranged so that gratings of the diffraction grating are tilted relative to the radial direction of the optical disk so that two focused spots of ±1st order diffracted light on the optical disk produced by the diffraction grating are shifted by substantially one-half of a period of the periodic structure in opposite directions in the radial direction of the optical disk relative to a focused spot of 0th order diffracted light on the optical disk produced by the diffracting grating.

3. An optical head according to claim 1, wherein the periodic structure of the optical disk includes guiding grooves, and a width of one of the guiding grooves is different from a width between adjacent guiding grooves.